

**U.S. Pat. Appl. Ser. No. 10/531,961
Attorney Docket No. 10191/3917
Reply to Final Office Action of October 6, 2006**

REMARKS

Claim 20 is canceled, without prejudice, claim 25 is added, and therefore claims 12, 14 to 19, and 21 to 25 are now pending (since claims 1 to 11, and 13 were previously canceled).

It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration of the present application is respectfully requested.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper, and cited references.

Applicants note with appreciation the indication that claim 15 includes allowable subject matter.

The drawings were objected to as not illustrating the features of supply lines arranged in a star structure network having at least one star point and of a central litz wire connected at both ends to a vehicle body. It is respectfully submitted that these features do not need to be shown because under 37 C.F.R. § 1.81 (a) — to which § 1.83 (a) is subject — an applicant is only “required to furnish a drawing of [the] invention where necessary for the understanding of the subject matter sought to be patented.” It is respectfully submitted that the features of supply lines arranged in a star structure network having at least one star point and of the connection of the second side of the litz wire to the vehicle body are fully described by the specification and/or would be understood by a person having ordinary skill in the art, so that drawings of these aspects are not necessary, in particular with respect to the latter feature, since the connection of one of the sides of the litz wire to the vehicle body is illustrated.

Nevertheless, to facilitate matters, a New sheet of drawings of Figures 8 and 9 is submitted to address the objections to provide figures to illustrate the features of supply lines arranged in a star structure network having at least one star point and of a central litz wire connected at both ends to a vehicle body. No new matter is added and Figures 8 and 9 are supported by the present application, including the specification. Approval and entry are respectfully requested. Withdrawal of the objections is therefore respectfully requested.

Claim 12 was rejected under the second paragraph of 35 U.S.C. § 112 as indefinite.

The gist of this rejection is that the Examiner apparently does not understand the portion of claim 12, which provides that “supply lines arranged in a star structure and having at least one star point.” In this regard, the Final Office Action apparently and

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incorrectly indicates that the recited star structure refers to an individual line, rather than to the recited “supply lines”—*i.e.*, the plural form of the word indicates that the subject of the arrangement of claim 12 is not a single line, but rather are multiple lines as a whole. Thus, a careful reading of claim 12 (as originally presented) clearly indicates that the Office Action’s interpretation is incorrect, since claim 12 plainly refers to lines arranged in a star network topology.

Furthermore, even assuming for purposes of this response that claim 12 may read on the Examiner’s interpretation, it is respectfully submitted that originally presented claim 12 would have been readily understood otherwise by those of ordinary skill in the art. Claims are not to be read in a vacuum, but in light of the specification. When the claim is read in light of what the specification discloses (see page 2, lines 13 to 16, and page 4, line 34 to page 5, line 3), Applicants submit that one of ordinary skill in the art would readily be able to discern the scope of claim 12. The specification (see page 2, lines 13 to 16, and page 4, line 34 to page 5, line 3) refers to a star network topology having at least one central point that forms a star point. One skilled in the art would understand that the star structure and the at least one star point refer to a star topology when considering the context — supply lines — and that which the specification discloses.

In the “Response to Arguments” section of the Final Office Action, it is asserted that “the specification fails to disclose a ‘star network topology’ and no figure is provided which illustrates a vehicle star structure topology”, and that “the specification fails to disclose the use of the term ‘star network topology.’” Notwithstanding the specification’s omission of the precise term “star network topology,” the specification clearly describes such a topology, discloses terms generally used to describe features of such a topology, and clearly discloses that a reference in the application to a star structure or star point is a reference to features of such a topology. In this regard, the specification at page 2, lines 13 to 16 describes “central distribution nodes” as “star points within the supply line structure,” unequivocally indicating that a star point is a node within a network, *i.e.*, a star point is not an element in an individual wire, as suggested in the Office Action. The reference by the specification to a central distribution node and its association with a star point is a clear reference to a star network topology having a star point. In this regard, Applicants refer the Examiner to the first sentence of the description of a star network in David A. Stamper, “Business Data Communication” 294, The Benjamin/Cummings Publishing Company, Inc. (4th ed. 1994) (a copy of which accompanied Applicants’ Response filed July 6, 2006),

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which, states that “[i]n a star network, the central or hub node serves as a message switch by accepting a message from the originating node and forwarding it to the destination node.”

Nevertheless, to facilitate matters and to clarify the claimed subject matter, claim 12 has been rewritten herein without prejudice to recite the feature of “supply lines arranged in a star network topology and having at least one network star point.” No new matter is added, since, as explained above, both the originally presented claim 12 and the specification disclose these features.

In view of the foregoing, it is respectfully submitted that claim 12 is definite. Reversal of this rejection is therefore respectfully requested.

Claims 12, 14, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 3,973,227 (the “Erculiani” reference) and U.S. Patent No. 4,077,022 (the “Pitts” reference).

As regards the obviousness rejections of the claims, to reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claim 12, as presented, relates to a supply line structure and provides that the supply line structure is arranged to supply energy to electrical components of an automotive vehicle and to transmit information between at least some of the electrical components. Claim 12 provides for supply lines arranged in a star network topology and having at least one network star point.¹

¹ The amendments to the claims were not necessitated by the rejections to the claims and that the arguments presented below apply with equal force to the claims as originally presented.

In this regard, the feature of the arrangement of the supply line structure to supply energy to electrical components of an automotive vehicle and to transmit information between at least some of the electrical components was recited in the preamble of claim 12 as originally presented. The Examiner should have considered this feature of the preamble since Applicants, in the Response filed July 6, 2006, distinguished claim 12 over the prior art in view of this feature and “clear reliance on the preamble during prosecution to distinguish

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The “Erculiani” reference refers to a communication system having transmission lines. The “Erculiani” reference does not disclose or even suggest supply lines that supply energy and also transmit information having the features provided in claim 12. Furthermore, the “Erculiani” reference does not disclose or even suggest an arrangement of the lines in a star network topology or a network star point. The secondary “Pitts” reference does not correct these deficiencies of the “Erculiani” reference.

Thus, the combination of the “Erculiani” reference and the “Pitts” reference does not disclose or suggest each feature of claim 12, so that claim 12, as presented, is allowable.

Claims 14 and 24 depend from claim 12 and are therefore allowable for the same reasons as claim 12.

Withdrawal of the obviousness rejections of claims 12, 14, and 24 is therefore respectfully requested.

Claims 12 and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,745,027 (the “Malville” reference), the “Erculiani” reference, the “Pitts” reference.

Claim 12, as presented, relates to a supply line structure and provides for supply lines arranged in a star network topology and having at least one network star point.²

The Final Office Action asserts that figure 1 of the “Malville” reference discloses a star network topology and that electric power supply 4 of the “Malville” reference discloses a star point. While figure 1 may concern a communication network 1, nowhere does the “Malville” reference disclose or suggest that the network is a star network or that any node of the network including the electric power supply 4 operates as a star node. Thus, the “Malville” reference does not disclose or suggest a supply line structure such as that

the claimed invention from the prior art transforms the preamble into a claim limitation.” *Catalina Mktg. Int’l v. Coolsavings.com, Inc.*, 289 F.3d 801, 808-09, 62 U.S.P.Q.2d 1781, 1785 (Fed. Cir. 2002); M.P.E.P. § 2111.02. (Continued. . .)

One skilled in the art would understand that extremely thin wires cannot be used for transmitting a current high enough for supplying energy to electrical components of an automobile vehicle.

Furthermore, with respect to the features of a star network topology and a network star point, as explained above, the amendments to claim 12 merely clarify the subject matter already included in the claim as originally presented. The Examiner should have considered these features with respect to the claim as originally presented since “[d]uring patent examination, the pending claims must be ‘given their broadest reasonable interpretation consistent with the specification.’” M.P.E.P. § 2111 (emphasis added). For the reasons set forth above, the Examiner’s interpretation of the claim language as originally presented was unreasonable, particularly in view of the specification.

² As explained above, the amendments to the claims were not necessitated by the rejections to the claims and the arguments presented below apply with equal force to the claims as originally presented.

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recited in claim 12 that includes supply lines arranged in a star network topology and having at least one network star point. Neither "Erculiani" nor the "Pitts" reference corrects the critical deficiencies of the primary "Malville" reference.

Thus, the combination of the "Malville," "Erculiani," and "Pitts" references does not disclose or suggest each feature of claim 12, as presented, so that claim 12 is allowable.

Claim 14 depends from claim 12 and is therefore allowable for the same reasons as claim 12.

Withdrawal of the obviousness rejections of claims 12 and 14 is therefore respectfully requested.

Claims 16 to 18 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the "Malville" reference, the "Erculiani" reference, the "Pitts" reference, and U.S. Patent No. 3,300,682 (the "Frungel" reference).

Claims 16 to 18 ultimately depend from claim 12. Since the "Frungel" reference does not cure the deficiencies of the combination of the "Malville," "Erculiani," and "Pitts" references, as explained above, it is respectfully submitted that claims 16 to 18 are allowable for the same reasons as claim 12, as presented.

Withdrawal of the obviousness rejection of claims 16 to 18 is therefore respectfully requested.

Claims 19 and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the "Erculiani" reference and U.S. Patent No. 6,495,763 (the "Eichmann" reference).

To facilitate matters, claim 20 has been canceled herein without prejudice, thereby rendering moot the rejection of claim 20.

Claim 19 depends from claim 12. Since the "Eichmann" reference does not cure the critical deficiencies of the "Erculiani" reference (whether taken alone or in combination with the "Pitts" and/or "Malville" references), as explained above, it is respectfully submitted that claim 19 is allowable for the same reasons as claim 12, as presented.

Withdrawal of the obviousness rejection of claim 19 is therefore respectfully requested.

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Claim 21 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the “Erculiani” reference and U.S. Patent No. 4,642,417 (the “Ruthrof et al.” reference).

Claim 21 depends from claim 12, and since the “Ruthrof” reference does not cure the deficiencies of the “Erculiani” reference (whether taken alone or in combination with the “Pitts” and/or “Malville” references), it is respectfully submitted that claim 21 is allowable for the same reasons as claim 12, as presented.

Withdrawal of the obviousness rejection of claim 21 is therefore respectfully requested.

Claims 22 and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the “Erculiani” reference and U.S. Patent Application Publication No. 2002/0030249 (the “Yoshida” reference).

Claims 22 and 23 depend from claim 12 and since the “Yoshida” reference does not cure the deficiencies of the “Erculiani” reference (whether taken alone or in combination with the “Pitts” and/or “Malville” references), it is respectfully submitted that claims 22 and 23 are allowable for the same reasons as claim 12, as presented.

Withdrawal of the obviousness rejections of claims 22 and 23 is therefore respectfully requested.

New claim 25 does not add any new matter and is supported in the specification. Claim 25 depends from claim 12, and is therefore allowable for the same reasons as claim 12, as presented. Furthermore, claim 25 provides that “the capacitors include a capacitor between each pair of adjacent ones of the outer litz wires to short-circuit the wires of the respective pair with respect to each other.” The Final Office Action asserts that the “Pitts” reference (in particular, figure 3 and column 3, lines 15 to 30) discloses a coaxial cable arrangement in which the outer coaxial conductors are short circuited with each other by capacitors. However, the capacitors 50 to 53, and 56 of the “Pitts” reference are arranged between respective groups of conductors. Any review of the “Pitts” reference makes plain that it does not disclose or suggest a plurality of outer litz wires disposed about a central litz wire, where each pair of adjacent outer litz wires includes a respective capacitor between them so that the wires of each of pair are short-circuited with respect to each other. For this additional reason, claim 25 is allowable.

Accordingly, all of pending claims 12, 14 to 19, and 21 to 25 are allowable.

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Conclusion

In view of the foregoing, it is respectfully submitted that all of claims 12, 14 to 19, and 21 to 25 are allowable. It is therefore respectfully requested that the objections and rejections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

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Respectfully submitted,

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